Bruhat Bengaluru Mahanagara Palike

BRUHAT BENGALURU MAHANAGARA PALIKE,
BYATARAYANAPURA DIVISION

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

QUALITY CONTROL REPORTS

"FIRST & FINAL BILL"

NAME OF WORK : Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Quality Control Abstract

Job code: 007-22-000004.

Bill Number: 1st & Final Bill.

Name of contractor: Sri Samba Shiva.

Sl No.	Description of Materials	Test	No of Units Tested	No of samples conducted	Test result	Remarks
1	Cement	IS: 12269-1987	Per Batch	Per Batch	Satisfactory	-
2	Fine Aggregates	IS: 383-1970	Per Batch	Per Batch	Satisfactory	-
3	Course Aggregates	As per Morth	Per Batch	Per Batch	Satisfactory	-
4	WMM	to IS 2386(Part I to IV)- 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.	Per Batch	Per Batch	Satisfactory	-
5	Steel TMT	IS: 1876:2008, IS 1608:2005,IS1599:1985	Per Batch	Per Batch	Satisfactory	-
6	Slabs 100 and 250 mm		Per Batch	Per Batch	Satisfactory	-
7	M20 Concrete	Compressive Strength (IS 516-1959)	48	48	Satisfactory	-
8	Asphalt	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2) I.S 73 -1992 Specifications, Tests Conforms to IS 2386(Part I to IV)- 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.	Per Batch	Per Batch	Satisfactory	-

9 Drain Slabs
100mm & 250mm

SHRIYA CONSTRUCTION AND CONSULTANCY

MOBILE: 9945744759

SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/Cement Date: 29/03/2022

1. Test report on cement Concrete Cubes:

Sub: Testing of 53 Grade Cement Sample Pertaining to IS: 12269-1987

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

PHYSICAL TESTS ON CEMENT

Grade Of Cement: 53, OPC

Table 1.1

SL No	Name of Tests	Result	As Per IS Requirements (IS 8112-1989)
1.	Initial Setting Time	162 Min	Shall Not be less than 30 Min
2.	Final Setting Time	274 Min	Shall Not be More than 600 Min
3.	Fineness (by dry sieve on IS 90 micron Seieve)	1.80 %	Not to Exceed 10.0 %
4.	Soundness Test by Lee-Chatelier's Method	2.16 mm	Shall not be more than 10 mm
5.	Compressive strength (3 days on average of 3 results	28.40 N/Sqmm	Shall not be less than 27 N /Sq mm

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NO: BTP-D/PMC/VIN-02/Cement

Date: 6/04/2022

1. Test report on cement Concrete Cubes:

Sub: Testing of 53 Grade Cement Sample Pertaining to IS: 12269-1987

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

PHYSICAL TESTS ON CEMENT

Grade Of Cement: 53, OPC

Table 1.1

SL No	Name of Tests	Result	As Per IS Requirements (IS 8112-1989)
1.	Initial Setting Time	165 Min	Shall Not be less than 30 Min
2.	Final Setting Time	270 Min	Shall Not be More than 600 Min
3.	Fineness (by dry sieve on IS 90 micron Seieve)	1.85%	Not to Exceed 10.0 %
4.	Soundness Test by Lee-Chatelier's Method	2.23 mm	Shall not be more than 10 mm
5.	Compressive strength (3 days on average of 3 results	29.75 N/Sqmm	Shall not be less than 27 N /Sq mm

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NO: BTP-D/PMC/VIN-02/Cement

Date: 9/04/2022

1. Test report on cement Concrete Cubes:

Sub: Testing of 53 Grade Cement Sample Pertaining to IS: 12269-1987

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

PHYSICAL TESTS ON CEMENT

Grade Of Cement: 53, OPC

Table 1.1

SL No	Name of Tests	Result	As Per IS Requirements (IS 8112-1989)
1.	Initial Setting Time	159 Min	Shall Not be less than 30 Min
2.	Final Setting Time	275 Min	Shall Not be More than 600 Min
3.	Fineness (by dry sieve on IS 90 micron Seieve)	1.90 %	Not to Exceed 10.0 %
4.	Soundness Test by Lee-Chatelier's Method	2.15 mm	Shall not be more than 10 mm
5.	Compressive strength (3 days on average of 3 results	28.45 N/Sqmm	Shall not be less than 27 N /Sq mm

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/Fine Agg

Date: 29/03/2022

1. Test report on Fine Aggregates:

Sub: Testing of Fine Aggregates Sample Pertaining to IS: 383-1970 (Reaffirmed 2002).

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

SIEVE ANALYSIS

Table 1.1

IS Sieve Size, mm	% Passing	IS: 383-1970 (Reaffirmed 2002). Percentage Passing			Result/ Remarks
		Zone I	Zone II	Zone III	
4.75mm	95.35	90-100	90-100	90-100	The Sample Conforms Grade II
2.36mm	82.65	60-95	75-100	85-100	
1.18 mm	86.25	30-70	55-90	75-100	
600 micr.	48.90	15.34	35-59	60-79	
300 mic.	23.40	5-20	8-30	12-40	
150 mic.	8.10	0-10	0-10	0-10	

SL No	Name of Tests	Sample	Result	Requirements as per IS: 383-1970 (Reaffirmed 2002).
1.	Bulking Of Sand	01	17.85%	NA
2.	Silt Content	-	.62%	Not more than 8%
3.	Specific Gravity	-	2.60	--

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SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/Fine Agg

Date: 06/04/2022

1. Test report on Fine Aggregates:

Sub: Testing of Fine Aggregates Sample Pertaining to IS: 383-1970 (Reaffirmed 2002).

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

SIEVE ANALYSIS

Table 1.1

IS Sieve Size, mm	% Passing	IS: 383-1970 (Reaffirmed 2002). Percentage Passing			Result/ Remarks
		Zone I	Zone II	Zone III	
4.75mm	95.35	90-100	90-100	90-100	The Sample Conforms Grade II
2.36mm	82.65	60-95	75-100	85-100	
1.18 mm	86.25	30-70	55-90	75-100	
600 micr.	48.90	15.34	35-59	60-79	
300 mic.	23.40	5-20	8-30	12-40	
150 mic.	8.10	0-10	0-10	0-10	

SL No	Name of Tests	Sample	Result	Requirements as per IS: 383-1970 (Reaffirmed 2002).
1.	Bulking Of Sand	01	18.10%	NA
2.	Silt Content	-	.64%	Not more than 8%
3.	Specific Gravity	-	2.65	--

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NO: BTP-D/PMC/VIN-02/Fine Agg

Date: 09/04/2022

1. Test report on Fine Aggregates:

Sub: Testing of Fine Aggregates Sample Pertaining to IS: 383-1970 (Reaffirmed 2002).

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

SIEVE ANALYSIS

Table 1.1

IS Sieve Size, mm	% Passing	IS: 383-1970 (Reaffirmed 2002). Percentage Passing			Result/ Remarks
		Zone I	Zone II	Zone III	
4.75mm	95.35	90-100	90-100	90-100	The Sample Conforms Grade II
2.36mm	82.65	60-95	75-100	85-100	
1.18 mm	86.25	30-70	55-90	75-100	
600 micr.	48.90	15.34	35-59	60-79	
300 mic.	23.40	5-20	8-30	12-40	
150 mic.	8.10	0-10	0-10	0-10	

SL No	Name of Tests	Sample	Result	Requirements as per IS: 383-1970 (Reaffirmed 2002).
1.	Bulking Of Sand	01	17.20%	NA
2.	Silt Content	-	.70%	Not more than 8%
3.	Specific Gravity	-	2.66	--

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SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/Cou Agg Date: 29/03/2022

TEST REPORT ON COURSE AGGREGATES (GRADATION TEST)

Sub: To conduct tests on Course Aggrigates (Grade-V) mix.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	**100.00**	100
45.00	**97.15**	95-100
26.50	---	-
22.40	**79.25**	60-80
11.20	**53.40**	40-60
4.75	**36.15**	25-40
2.36	**24.60**	15-30
0.600	**19.35**	8-22
0.075	**3.85**	0-5

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Date: 29/03/2022

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)-1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.85%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.40%**	Not more than 35.0 %
3.	Water absorption, %	**0.40 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/Cou Agg

Date: 06/04/2022

TEST REPORT ON COURSE AGGREGATES (GRADATION TEST)

Sub: To conduct tests on Course Aggrigates (Grade-V) mix.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	**100.00**	100
45.00	**94.35**	95-100
26.50	**---**	-
22.40	**74.15**	60-80
11.20	**52.10**	40-60
4.75	**36.45**	25-40
2.36	**26.70**	15-30
0.600	**18.05**	8-22
0.075	**3.45**	0-5

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

Date: 06/04/2022

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)-1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.60%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.65 %**	Not more than 35.0 %
3.	Water absorption, %	**0.42 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

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SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/Cou Agg Date: 09/04/2022

TEST REPORT ON COURSE AGGREGATES (GRADATION TEST)

Sub: To conduct tests on Course Aggrigates (Grade-V) mix.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	**100.00**	100
45.00	**94.35**	95-100
26.50	---	-
22.40	**74.15**	60-80
11.20	**52.10**	40-60
4.75	**36.45**	25-40
2.36	**26.70**	15-30
0.600	**18.05**	8-22
0.075	**3.45**	0-5

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SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

Date: 09/04/2022

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)–1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.60%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.70%**	Not more than 35.0 %
3.	Water absorption, %	**0.43 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/WMM Grad

Date: 06-04-2022

TEST REPORT ON WET MIX MACADAM MIX (GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	**100.00**	100
45.00	**97.15**	95-100
26.50	---	-
22.40	**79.26**	60-80
11.20	**53.41**	40-60
4.75	**36.16**	25-40
2.36	**24.61**	15-30
0.600	**19.32**	8-22
0.075	**3.82**	0-5

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TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)-1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.80%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.35%**	Not more than 35.0 %
3.	Water absorption, %	**0.43 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/WMM Grad Date: 07-04-2022

TEST REPORT ON WET MIX MACADAM MIX (GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	**100.00**	100
45.00	**94.36**	95-100
26.50	**---**	-
22.40	**74.14**	60-80
11.20	**52.15**	40-60
4.75	**36.40**	25-40
2.36	**26.71**	15-30
0.600	**18.04**	8-22
0.075	**3.43**	0-5

SHRIYA CONSTRUCTION AND CONSULTANCY

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SHRIYA CONSTRUCTION AND CONSULTANCY

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TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)-1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.50%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.60 %**	Not more than 35.0 %
3.	Water absorption, %	**0.41 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/BIT VG-30 Date: 13-04-2022

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 ;

SL No	Details	Test Results	Requirements as per I.S 73 –1992 Specifications
1.	Penetration at 25^0 C	**53.10^0 C**	Min. 45
2.	Ductility Value at 25^0 C	**108.50 cm**	40
3.	Flash point	**245^0 C**	Minimum 220^0 C
4.	Softening point	**52.10^0 C**	Min. 47

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SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/**BIT-CA** **Date: 13-04-2022**

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Dense Graded Bituminous Macadam.

Sub: Testing of Bitumen sample VG-30 Grade.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)–1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**22.10%**	Not more than 27.00 % for DBM
2.	Combined Flakiness and Elongation index, %	**25.14%**	Not more than 35.0 %
3.	Water absorption, %	**0.45%**	Not more than 2.0 %
4.	Specific gravity	**2.62**	-------
5.	Soundness	**6.79 %**	Max. 12 % in Sodium Sulphate

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SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/**BIT-EX** **Date: 13-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.

Sub: Testing of Bitumen sample VG-30 Grade.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.52 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	**100**	100
26.5	**96.24**	90-100
19.0	**81.16**	71-95
13.20	**74.41**	56-80
4.75	**48.71**	38-54
2.36	**36.04**	28-42
0.300	**17.89**	7-21
0.075	**6.39**	2-8

SHRIYA CONSTRUCTION AND CONSULTANCY

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SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/**BIT-STB** **Date: 13-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.

Sub: Testing of Bitumen sample VG-30 Grade.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (IV Revision)-2001 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1239**	900
2	Marshall Flow at 60°C, mm.	**3.20**	2.0 - 4.0

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NO: BTP-D/PMC/VIN-02/**BIT-EX** **Date: 13-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.

Sub: Testing of Bitumen sample VG-30 Grade.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.50 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	**100**	100
26.5	**96.44**	90-100
19.0	**80.56**	71-95
13.20	**72.61**	56-80
4.75	**47.09**	38-54
2.36	**35.79**	28-42
0.300	**18.26**	7-21
0.075	**5.16**	2-8

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NO: BTP-D/PMC/VIN-02/**BIT** **Date: 13-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.

Sub: Testing of Bitumen sample VG-30 Grade.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura
Ref: Material Testing/PMC/22-23.
Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.
Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (IV Revision)-2001 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1255**	900
2	Marshall Flow at 60°C, mm.	**3.42**	2.0 - 4.0

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NO: BTP-D/PMC/VIN-02/**BIT-VG-30** **Date: 14-04-2022**

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 ;

SL No	Details	Test Results	Requirements as per I.S 73 –1992 Specifications
1.	Penetration at 25^0 C	**51.10^0 C**	Min. 45
2.	Ductility Value at 25^0 C	**108.0 cm**	40
3.	Flash point	**238^0 C**	Minimum 220^0 C
4.	Softening point	**50.55^0 C**	Min. 47

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NO: BTP-D/PMC/VIN-02/**BIT-CA**

Date: 14-04-2022

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Bituminous Concrete.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)–1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**22.83 %**	Not more than 24.00 %
2.	Combined Flakiness and Elongation index, %	**27.57%**	Not more than 35.0 %
3.	Water absorption, %	**0.40%**	Not more than 2.0 %
4.	Specific gravity	**2.61**	-------
5.	Soundness	**5.30%**	Max. 12 % in Sodium Sulphate

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NO: BTP-D/PMC/VIN-02/BIT -EX

Date: 14-04-2022

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.40 %**

2. **Gradation Test**

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**97.25**	90-100
9.5	**82.10**	70-88
4.75	**65.50**	53-71
2.36	**52.70**	42-58
1.18	**40.35**	34-48
0.600	**34.75**	26-38
0.300	**23.60**	18-28
0.150	**18.25**	12-20
0.075	**7.15**	4-10

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NO: BTP-D/PMC/VIN-02/**BIT-STB** **Date: 14-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1360**	900
2	Marshall Flow at 60°C, mm.	**3.50**	2.0 - 4.0

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NO: BTP-D/PMC/VIN-02/**BIT-EX** **Date: 14-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.42%**

2. **Gradation Test**

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**95.24**	90-100
9.5	**84.11**	70-88
4.75	**67.44**	53-71
2.36	**53.81**	42-58
1.18	**41.69**	34-48
0.600	**33.49**	26-38
0.300	**25.62**	18-28
0.150	**17.27**	12-20
0.075	**8.39**	4-10

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NO: BTP-D/PMC/VIN-02/**BIT-STB** **Date: 14-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1350**	900
2	Marshall Flow at 60°C, mm.	**3.45**	2.0 - 4.0

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NO: BTP-D/PMC/VIN-02/**BIT-EX** **Date: 14-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.44 %**

2. **Gradation Test**

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**96.75**	90-100
9.5	**82.35**	70-88
4.75	**67.90**	53-71
2.36	**53.35**	42-58
1.18	**43.65**	34-48
0.600	**32.00**	26-38
0.300	**24.30**	18-28
0.150	**18.80**	12-20
0.075	**7.70**	4-10

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SHRIYA CONSTRUCTION AND CONSULTANCY

#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/**BIT-STB** **Date: 14-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1345**	900
2	Marshall Flow at 60°C, mm.	**3.32**	2.0 - 4.0

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NO: BTP-D/PMC/VIN-02/**BIT-EX**

Date: 14-04-2022

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

Name of Agency/ contractor: Sri C Halappa.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.43 %**

2. **Gradation Test**

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**95.00**	90-100
9.5	**81.40**	70-88
4.75	**65.90**	53-71
2.36	**52.30**	42-58
1.18	**44.75**	34-48
0.600	**30.25**	26-38
0.300	**24.80**	18-28
0.150	**18.65**	12-20
0.075	**7.00**	4-10

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/**BIT-STB** **Date: 14-04-2022**

1.TEST REPORT ON BITUMINOUS MIXES :

(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1365**	900
2	Marshall Flow at 60°C, mm.	**3.42**	2.0 - 4.0

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/Raft

Date: 11/04/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table1.1

Sl No	Location	Date Of Casting	Date Of Testing	Weight Of Cubes	Age in days	Load (KN)	ssive Strengt h N/mm2	Average Strength N/mm2
1	Navya Nagar Raft LHS Concrete and Culvrts	04-04-2022	11-04-2022	8.32	7	355.00	15.78	16.13
2		"	"	8.12	"	369.00	16.40	
3		"	"	8.62	"	341.00	15.16	
4		"	"	8.64	"	352.00	15.64	
5		"	"	8.69	"	385.00	17.11	
6		"	"	8.00	"	376.00	16.71	

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#1133, 3rd Floor, 3rd Stage, 'B' Cross, Yelahanka New Town Bangalore 560064.

NO: BTP-D/PMC/VIN-02/Raft Date: 02/05/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table 1.1

Sl No	Location	Date Of Casting	Date Of Testing	Weight Of Cubes	Age in days	Load (KN)	ssive Strengt h N/mm2	Average Strength N/mm2
1	Navya Nagar Raft LHS Concrete and Culvrts	04-04-2022	02-05-2022	8.41	28	587.00	26.09	25.24
2		"	"	8.63	"	563.00	25.02	
3		"	"	8.45	"	524.00	23.29	
4		"	"	8.64	"	569.00	25.29	
5		"	"	0.23	"	588.00	26.13	
6		"	"	8.61	"	576.00	25.60	

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NO: BTP-D/PMC/VIN-02/Raft

Date: 12/04/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table1.1

Sl No	Location	Date Of Casting	Date Of Testing	Weight Of Cubes	Age in days	Load (KN)	ssive Strength N/mm2	Average Strength N/mm2
1	Navya Nagar Raft LHS Concrete and Culvrts	05-04-2022	12-04-202	8.32	7	352.00	15.64	17.52
2		"	"	8.21	"	400.00	17.78	
3		"	"	8.14	"	425.00	18.89	
4		"	"	8.24	"	410.00	18.22	
5		"	"	8.12	"	394.00	17.51	
6		"	"	8.00	"	384.00	17.07	

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NO: BTP-D/PMC/VIN-02/Raft

Date: 12/04/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table1.1

Sl No	Location	Date Of Casting	Date Of Testing	Weight Of Cubes	Age in days	Load (KN)	ssive Strengt h N/mm2	Average Strength N/mm2
1	Navya Nagar Raft LHS Concrete and Culvrts	05-04-2022	12-04-202	8.32	7	352.00	15.64	17.52
2		"	"	8.21	"	400.00	17.78	
3		"	"	8.14	"	425.00	18.89	
4		"	"	8.24	"	410.00	18.22	
5		"	"	8.12	"	394.00	17.51	
6		"	"	8.00	"	384.00	17.07	

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NO: BTP-D/PMC/VIN-02/Raft

Date: 03/05/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table 1.1

Sl No	Location	Date Of Casting	Date Of Testing	Weight Of Cubes	Age in days	Load (KN)	ssive Strengt h N/mm2	Average Strength N/mm2
1	Navya Nagar Raft LHS Concrete and Culvrts	05-04-2022	03-05-2022	8.32	28	520.00	23.11	24.06
2		"	"	8.65	"	536.00	23.82	
3		"	"	8.45	"	514.00	22.84	
4		"	"	8.67	"	536.00	23.82	
5		"	"	8.10	"	544.00	24.18	
6		"	"	8.22	"	598.00	26.58	

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NO: BTP-D/PMC/VIN-02/Side Walls Date: 12/04/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table1.1

1	Navya Nagar Side Walls LHS Concrete and Culvrts	05-04-2022	12-04-2022	8.20	7	410.00	18.22	17.91
2		"	"	8.36	"	421.00	18.71	
3		"	"	8.36	"	430.00	19.11	
4		"	"	8.41	"	384.00	17.07	
5		"	"	8.25	"	397.00	17.64	
6		"	"	8.36	"	376.00	16.71	

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NO: BTP-D/PMC/VIN-02/Side Walls Date: 03/05/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table1.1

Sl No	Location	Date Of Casting	Date Of Testing	Weight Of Cubes	Age in days	Load (KN)	ssive Strengt h N/mm2	Average Strength N/mm2
1	Navya Nagar Side Walls LHS Concrete and Culvrts	05-04-2022	03-04-2022	8.12	28	555.00	24.67	23.33
2		"	"	8.36	"	510.00	22.67	
3		"	"	8.22	"	563.00	25.02	
4		"	"	8.20	"	520.00	23.11	
5		"	"	8.30	"	490.00	21.78	
6		"	"	8.45	"	511.00	22.71	

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NO: BTP-D/PMC/VIN-02/Side Walls

Date: 13/04/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table1.1

Sl No	Location	Date Of Casting	Date Of Testing	Weight Of Cubes	Age in days	Load (KN)	ssive Strength N/mm2	Average Strength N/mm2
1	Navya Nagar Side Walls RHS Concrete and Culvrts	06-04-2022	13-04-2022	8.21	7	430.00	19.11	17.78
2		"	"	8.24	"	579.00	25.73	
3		"	"	8.14	"	241.00	10.71	
4		"	"	8.29	"	361.00	16.04	
5		"	"	8.41	"	405.00	18.00	
6		"	"	8.36	"	384.00	17.07	

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NO: BTP-D/PMC/VIN-02/Side Walls Date: 04/05/2022

Test report on cement Concrete Cubes:

Sub: Testing of concrete cubes (for below said no of days – Compressive Strength)

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CUBES

CUBE SPECIMENS

Dimentions of Specimens: 150x150x150mm

Grade Of concrete: **M20**

Table1.1

Sl No	Location	Date Of Casting	Date Of Testing	Weight Of Cubes	Age in days	Load (KN)	ssive Strengt h N/mm2	Average Strength N/mm2
1	Navya Nagar Side Walls LHS Concrete and Culvrts	06-04-2022	04-05-2022	8.20	28	551.00	24.49	24.19
2		"	"	8.21	"	564.00	25.07	
3		"	"	8.65	"	534.00	23.73	
4		"	"	8.30	"	560.00	24.89	
5		"	"	8.45	"	521.00	23.16	
6		"	"	8.64	"	536.00	23.82	

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RESULTS OF PHYSICAL PROPERTIES OF TMT STEEL

SPECIMENS 8,10, AND 12,MM DIA

Date of Testing : 13/04/2022

Grade Of Steel: **Fe 500.**
Technical Ref: IS.1786:2008, IS 1608:2005, IS 1599:1985(Reaffined-2006).

Table

SL No	Grade	Nominal Size of Rebar (Dia)	Mass (KG/meter)	Tensile Strength		
				20% Proof Stress / Yeild Stress (N/mm2)	Tensile Strength (N/mm2)	Elongation Percent on gauge Length
1.	Fe 500	10mm	.61	545	560	14.60
2.	Fe 500	12mm	.89	575	580	14.40

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

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NO: BTP-D/PMC/VIN-02/DRN. Slab Date: 16/05/2022

Precast Drain Slab 100mm Thick (Core Cutting Method) Test Report

Sub: Testing of Concrete Drain Slab (Core Cutting Method) – Compressive Strength

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CORE

CORE SPECIMENS

Grade Of concrete: **M20**
Technical Ref:. IS.516-1959 (Reaffirmed), Sp 24-1983.

Table 1.1

Dia of Specimens: 50 mm =D

SL No	Height of core (H)mm	Weight of Core (KG)	Dencity of core (KG/m3)	H/D	Correction factor of H/D	Load KN	Compressive Strength-N/mm2	Correction Factor for dia (Strength x1.08)	Corrected Compressive Strength	Equavenent Cube Compressive Strength
1.	81	.355	2317.9	1.56	.960	34.5	17.57	18.98	18.22	22.95
2.	80	.368	2342.7	1.60	.960	35.6	18.13	19.58	18.80	23.40
3.	82	.382	2372.5	1.64	.960	33.2	16.91	18.26	17.53	21.95

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NO: BTP-D/PMC/VIN-02/CUL. Slab

Date: 17/05/2022

Precast Culvert Slab 250mm Thick (Core Cutting Method) Test Report

Sub: Testing of Culvert Slab of 250mm Thick (Core Cutting Method) – Compressive Strength).

Name of Work :- Improvements to Roads and drains in Vinayaka Layout 2nd Stage and surrounding areas in ward no -07, Byatarayanapura

Ref: Material Testing/PMC/22-23.

Report submitted to: Assistant Executive Engineer, Byatarayanapura Division, BBMP Bangalore.

Name of Agency/ contractor: Sri Samba Shiva.

RESULTS OF COMPRESSIVE STRENGHT OF CONCRETE CORE

CORE SPECIMENS

Grade Of concrete: **M20**
Technical Ref:. IS.516-1959 (Reaffirmed), Sp 24-1983.

Table 1.1

Dia of Specimens: 100 mm =D

SL No	Height of core (H)mm	Weight of Core (KG)	Dencity of core (KG/m3)	H/D	Correction factor of H/D	Load KN	Compressive Strength-N/mm2	Correction Factor for dia (Strength x1.08)	Corrected Compressive Strength	Equavenent Cube Compressive Strength
1.	170	3.118	2335.2	1.70	.960	142.5	18.14	19.60	18.81	23.46
2.	173	3.231	2377.9	1.73	.960	138.6	17.65	19.06	18.30	22.24
3.	173	3.291	2394.4	1.75	.960	140.3	17.86	19.29	18.52	23.19

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